

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

A1 Claim 1 (currently amended): A method for re-ordering requests for shared resources, the method comprising:

receiving, by an arbiter, requests for accessing the shared resources from one or more requestors, wherein a plurality of requests may be received from each requestor;

arbitrating, by the arbiter, between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order;
and

selecting, by the arbiter, a next request to access the shared resources based on the re-ordering of requests;
and

communicating an information from the arbiter to a memory controller, where the memory controller accesses the shared resources and the information permits the memory controller to service the next request selected by the arbiter.

Claim 2 (original) The method of claim 1, further comprising:

associating a unique identifier tag with each request.

Claim 3 (original): The method of claim 2, further comprising:

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using the identifier tag by the requestors to keep track of when the plurality of requests from each requestor are serviced.

Claim 4 (currently amended): The method of claim 3, further comprising:

initiating servicing of the selected request; and
transmitting the identifier tag associated with the selected request and a strobe signal to a requestor that sent the selected request.

Claim 5 (original): The method of claim 4, further comprising:

embedding additional information in the identifier tag that relates to data associated with the request.

Claim 6 (original): The method of claim 1, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 7 (original): The method of claim 5, wherein the selected request comprises a memory write request.

Claim 8 (original): The method of claim 7, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 9 (original): The method of claim 5, wherein the selected request comprises a memory read request.

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Claim 10 (original): The method of claim 9, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.

Claim 11 (currently amended): A system for re-ordering requests for shared resources, the system comprising:

one or more requestors for sending requests for accessing the shared resources, wherein a plurality of requests may be received from each requestor;

an arbiter for receiving the plurality of request and for arbitrating between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order; and

a memory controller configured to access the shared resources, wherein the arbiter communicates an information to the memory controller and wherein the information permits the memory controller to service a next request selected by the arbiter based on a re-ordering of the requests.

Claim 12 (original): The system of claim 11, wherein the requestors associate a unique identifier tag with each request.

Claim 13 (original): The system of claim 12, wherein the requestors use identifier tags to keep track of when the plurality of requests from each requestor are serviced.

Claim 14 (currently amended): The system of claim 13, wherein the arbiter initiates servicing of the selected request; and transmits the identifier tag associated with

the selected request and a strobe signal to a requestor that sent the selected request.

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Claim 15 (original): The system of claim 14, wherein the identifier tag includes additional information that relates to data associated with the selected request.

Claim 16 (original): The system of claim 11, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 17 (original): The system of claim 15, wherein the selected request comprises a memory write request.

Claim 18 (original): The system of claim 17, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 19 (original): The system of claim 15, wherein the selected request comprises a memory read request.

Claim 20 (original): The system of claim 19, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.

Claim 21 (currently amended): An apparatus for re-ordering requests for shared resources, the apparatus comprising:

means for receiving, by an arbiter, requests for accessing the shared resources from one or more requestors,

wherein a plurality of requests may be received from each requestor;

Al means for arbitrating, by the arbiter, between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order; ~~and~~

means for selecting, by the arbiter, a next request to access the shared resources based on the re-ordering of requests; and

means for communicating an information from the arbiter to a memory controller, where the memory controller accesses the shared resources and the information permits the memory controller to service the next request selected by the arbiter.

Claim 22 (original): The apparatus of claim 21, further comprising:

means for associating a unique identifier tag with each request.

Claim 23 (original): The apparatus of claim 22, further comprising:

means for using the identifier tag by the requestors to keep track of when the plurality of requests from each requestor are serviced.

Claim 24 (currently amended): The apparatus of claim 23, further comprising:

means for initiating servicing of the selected request; and

Al means for transmitting the identifier tag associated with the selected request and a strobe signal to a requestor that sent the selected request.

Claim 25 (original): The apparatus of claim 24, further comprising:

means for embedding additional information in the identifier tag that relates to data associated with the request.

Claim 26 (original): The apparatus of claim 21, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 27 (original): The apparatus of claim 25, wherein the selected request comprises a memory write request.

Claim 28 (original): The apparatus of claim 27, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 29 (original): The apparatus of claim 25, wherein the selected request comprises a memory read request.

Claim 30 (original): The apparatus of claim 29, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.